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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,753	09/03/2004	Radislav Nikolaevich Vorobiev		8918

7590 02/27/2006

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EXAMINER

WIEHE, NATHANIEL EDWARD

ART UNIT PAPER NUMBER

3745

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/506,753

Applicant(s)

VOROBIEV ET AL.

Examiner

Nathan Wiehe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09032004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 3 September 2004 is noted. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. The specification appears to be a direct English translation.

The title of the invention, "Improved Turbine" is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --Two Rotor Senger Wheel Turbine--.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by House (4,430,042). House discloses a turbine having a rotor (10) with channels (14) and a casing (24) containing the rotor (1) and having channels (30). In operation working fluid is supplied to rotor channels (14) and accelerated while flowing out of the channels causing the rotor (10) to rotate. The expelled working fluid flows into a space between the rotor (10) and the casing (24) and rotates the casing (24) through frictional forces due to the proximity of the casing's (24) inner surface. The working fluid then flows out through casing channels (30) and accelerated in a direction opposite to the direction of flow out of the rotor. House also discloses that the velocity of the outside diameter of the rotor and the velocity of the inner surface of the casing are ideally equal (House column 4, line 69-column 5, line 3). House further discloses the use of belting or gearing to interconnected the rotation of the rotor and the casing, inherently applying a load to maintain these relative velocities (House column 5, lines 35-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over House in view of Gill (999,776). House discloses the invention substantially as claimed except for the use of a Segner wheel and pipe based nozzles. Gill discloses a reaction turbine consisting of a Segner wheel comprising pipes (4) with bent off open ends (9). Gill also discloses the use of bent pipe portions (9) having an increasing diameter, which reduces the losses and increases useful work (Gill column 3, lines 62-column 4, lines 85). Gill's turbine allows for appropriate output efficiencies at relatively lower speeds (Gill column 2, lines 65-70). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inner rotor and bent off ends of House by using a Segner wheel and specifically designed bent pipe nozzles as taught by Gill in order to increase turbine's efficiency.

Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over House in view of Gill as applied to claim 10 above, and further in view of Erickson (4,674,950). The modified invention of House discloses the invention substantially as claimed except for the use of the use of streamlined shapes. Erickson discloses a tubular body (40) rotating through a working fluid and having a streamlined airfoil shape.

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The airfoil shape of Erickson appears to have a chord length at least five times greater than the thickness leading to reduced drag on the body (Erickson column 5, lines 18-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the turbine of House by using pipes having an airfoil streamlined shape as taught by Erickson in order to reduce the drag on the pipes.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent issued to Eskeli discloses a counter rotating turbine comprising two rotors using working fluid supplied to nozzles to rotate the rotors. The patent issued to Ruble discloses a Senger wheel with an internal drum arrangement.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Wiehe whose telephone number is (571)272-8648. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571)272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nathan Wiehe
Examiner
Art Unit 3745



EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
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2/21/06